

L. HELMS

P#9

OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/509,098

DATE: 07/18/2001

TIME: 10:20:42

Input Set : A:\53466274.app

Output Set: N:\CRF3\07182001\I509098.raw

P.S

ENTERED

3 <110> APPLICANT: TSUCHIYA, MASAYUKI
5 <120> TITLE OF INVENTION: NATURAL HUMANIZED ANTIBODY
7 <130> FILE REFERENCE: 053466/0274
9 <140> CURRENT APPLICATION NUMBER: 09/509,098
10 <141> CURRENT FILING DATE: 2000-03-22
12 <150> PRIOR APPLICATION NUMBER: PCT/JP98/04469
13 <151> PRIOR FILING DATE: 1998-10-02
15 <150> PRIOR APPLICATION NUMBER: JP 9-271726
16 <151> PRIOR FILING DATE: 1997-10-03
18 <160> NUMBER OF SEQ ID NOS: 203
20 <170> SOFTWARE: PatentIn Ver. 2.1
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 394
24 <212> TYPE: DNA
25 <213> ORGANISM: Murine sp.
27 <220> FEATURE:
28 <221> NAME/KEY: sig_peptide
29 <222> LOCATION: (1)..(72)
31 <220> FEATURE:
32 <221> NAME/KEY: mat_peptide
33 <222> LOCATION: (73)..(393)
35 <220> FEATURE:
36 <221> NAME/KEY: CDS
37 <222> LOCATION: (1)..(393)
39 <220> FEATURE:
40 <223> OTHER INFORMATION: Description of Artificial Sequence: cDNA coding
41 for L chain V region of anti-HM1.24 antibody
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44 atg ggc ttc aag atg gag tca cat ttt ctg gtc ttt gta ttc gtg ttt 48
45 Met Gly Phe Lys Met Glu Ser His Phe Leu Val Phe Val Phe Val Phe
46 -20 -15 -10
48 ctc tgg ttg tct ggt gtt gac gga gac att gtg atg acc cag tct cac 96
49 Leu Trp Leu Ser Gly Val Asp Gly Asp Ile Val Met Thr Gln Ser His
50 -5 -1 1 5
52 aaa ttc atg tcc aca tca gta gga gac agg gtc agc atc acc tgc aag 144
53 Lys Phe Met Ser Thr Ser Val Gly Asp Arg Val Ser Ile Thr Cys Lys
54 10 15 20
56 gcc agt cag gat gtg aat act gct gta gcc tgg tat caa caa aaa cca 192
57 Ala Ser Gln Asp Val Asn Thr Ala Val Ala Trp Tyr Gln Gln Lys Pro
58 25 30 35 40
60 gga caa tcg cct aaa cta ctg att tac tcg gca tcc aac cgg tac act 240
61 Gly Gln Ser Pro Lys Leu Leu Ile Tyr Ser Ala Ser Asn Arg Tyr Thr
62 45 50 55
64 gga gtc cct gat cgc atc act ggc agt gga tct ggg acg gat ttc act 288
65 Gly Val Pro Asp Arg Ile Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr
66 60 65 70
68 ttc acc atc agc agt gtg cag gcg gaa gac ctg gca ctt tat tac tgt 336

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69 Phe Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Leu Tyr Tyr Cys
70          75          80          85
72 cag caa cat tat agt act cca ttc acg ttc ggc tcg ggg aca aag ttg   384
73 Gln Gln His Tyr Ser Thr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu
74          90          95          100
76 gaa ata aaa c                                          394
77 Glu Ile Lys
78 105
81 <210> SEQ ID NO: 2
82 <211> LENGTH: 131
83 <212> TYPE: PRT
84 <213> ORGANISM: Murine sp.
86 <220> FEATURE:
87 <223> OTHER INFORMATION: Description of Artificial Sequence: Amino acid
88     sequence of L chain V region of mouse anti-HM1.24
89     antibody
91 <400> SEQUENCE: 2
92 Met Gly Phe Lys Met Glu Ser His Phe Leu Val Phe Val Phe Val Phe
93          -20          -15          -10
95 Leu Trp Leu Ser Gly Val Asp Gly Asp Ile Val Met Thr Gln Ser His
96          -5          -1    1    5
98 Lys Phe Met Ser Thr Ser Val Gly Asp Arg Val Ser Ile Thr Cys Lys
99          10          15          20
101 Ala Ser Gln Asp Val Asn Thr Ala Val Ala Trp Tyr Gln Gln Lys Pro
102 25          30          35          40
104 Gly Gln Ser Pro Lys Leu Leu Ile Tyr Ser Ala Ser Asn Arg Tyr Thr
105          45          50          55
107 Gly Val Pro Asp Arg Ile Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr
108          60          65          70
110 Phe Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Leu Tyr Tyr Cys
111          75          80          85
113 Gln Gln His Tyr Ser Thr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu
114          90          95          100
116 Glu Ile Lys
117 105
121 <210> SEQ ID NO: 3
122 <211> LENGTH: 418
123 <212> TYPE: DNA
124 <213> ORGANISM: Murine sp.
126 <220> FEATURE:
127 <221> NAME/KEY: sig_peptide
128 <222> LOCATION: (1)..(57)
130 <220> FEATURE:
131 <221> NAME/KEY: mat_peptide
132 <222> LOCATION: (58)..(417)
134 <220> FEATURE:
135 <221> NAME/KEY: CDS
136 <222> LOCATION: (1)..(417)
138 <220> FEATURE:

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139 <223> OTHER INFORMATION: Description of Artificial Sequence: cDNA coding
 140 for H chain V region of mouse anti-HM1.24

141 antibody

143 <400> SEQUENCE: 3

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144 atg gaa tgt aac tgg ata ctt cct ttt att ctg tca gta act tca ggt 48
145 Met Glu Cys Asn Trp Ile Leu Pro Phe Ile Leu Ser Val Thr Ser Gly
146 -15 -10 -5
148 gcc tac tca cag gtt caa ctc cag cag tct ggg gct gag ctg gca aga 96
149 Ala Tyr Ser Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg
150 -1 1 5 10
152 cct ggg gct tca gtg aag ttg tcc tgc aag gct tct ggc tac acc ttt 144
153 Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
154 15 20 25
156 act ccc tac tgg atg cag tgg gta aaa cag agg cct gga cag ggt ctg 192
157 Thr Pro Tyr Trp Met Gln Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
158 30 35 40 45
160 gaa tgg att ggg tct att ttt cct gga gat ggt gat act agg tac agt 240
161 Glu Trp Ile Gly Ser Ile Phe Pro Gly Asp Gly Asp Thr Arg Tyr Ser
162 50 55 60
164 cag aag ttc aag ggc aag gcc aca ttg act gca gat aaa tcc tcc agt 288
165 Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser
166 65 70 75
168 aca gcc tac atg caa ctc agc atc ttg gca ttt gag gac tct gcg gtc 336
169 Thr Ala Tyr Met Gln Leu Ser Ile Leu Ala Phe Glu Asp Ser Ala Val
170 80 85 90
172 tat tac tgt gca aga gga tta cga cga ggg ggg tac tac ttt gac tac 384
173 Tyr Tyr Cys Ala Arg Gly Leu Arg Arg Gly Gly Tyr Tyr Phe Asp Tyr
174 95 100 105
176 tgg ggc caa ggc acc act ctc aca gtc tcc tca g 418
177 Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
178 110 115 120

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181 <210> SEQ ID NO: 4

182 <211> LENGTH: 139

183 <212> TYPE: PRT

184 <213> ORGANISM: Murine sp.

186 <220> FEATURE:

187 <223> OTHER INFORMATION: Description of Artificial Sequence: Amino acid
 188 sequence of H chain V region of mouse anti-

189 HM1.24 antibody

191 <400> SEQUENCE: 4

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192 Met Glu Cys Asn Trp Ile Leu Pro Phe Ile Leu Ser Val Thr Ser Gly
193 -15 -10 -5
195 Ala Tyr Ser Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg
196 -1 1 5 10
198 Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe
199 15 20 25
201 Thr Pro Tyr Trp Met Gln Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
202 30 35 40 45
204 Glu Trp Ile Gly Ser Ile Phe Pro Gly Asp Gly Asp Thr Arg Tyr Ser

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205          50          55          60
207 Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser
208          65          70          75
210 Thr Ala Tyr Met Gln Leu Ser Ile Leu Ala Phe Glu Asp Ser Ala Val
211          80          85          90
213 Tyr Tyr Cys Ala Arg Gly Leu Arg Arg Gly Gly Tyr Tyr Phe Asp Tyr
214          95          100          105
216 Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
217 110          115          120
221 <210> SEQ ID NO: 5
222 <211> LENGTH: 11
223 <212> TYPE: PRT
224 <213> ORGANISM: Artificial Sequence
226 <220> FEATURE:
227 <223> OTHER INFORMATION: Description of Artificial Sequence: CDR (1) of L
228 chain V region of anti-HM1.24 antibody
230 <400> SEQUENCE: 5
231 Lys Ala Ser Gln Asp Val Asn Thr Ala Val Ala
232 1          5          10
235 <210> SEQ ID NO: 6
236 <211> LENGTH: 7
237 <212> TYPE: PRT
238 <213> ORGANISM: Artificial Sequence
240 <220> FEATURE:
241 <223> OTHER INFORMATION: Description of Artificial Sequence: CDR (2) of L
242 chain V region of anti-HM1.24 antibody
244 <400> SEQUENCE: 6
245 Ser Ala Ser Asn Arg Tyr Thr
246 1          5
249 <210> SEQ ID NO: 7
250 <211> LENGTH: 9
251 <212> TYPE: PRT
252 <213> ORGANISM: Artificial Sequence
254 <220> FEATURE:
255 <223> OTHER INFORMATION: Description of Artificial Sequence: CDR (3) of L
256 chain V region of anti-HM1.24 antibody
258 <400> SEQUENCE: 7
259 Gln Gln His Tyr Ser Thr Pro Phe Thr
260 1          5
263 <210> SEQ ID NO: 8
264 <211> LENGTH: 5
265 <212> TYPE: PRT
266 <213> ORGANISM: Artificial Sequence
268 <220> FEATURE:
269 <223> OTHER INFORMATION: Description of Artificial Sequence: CDR (1) of H
270 chain V region of anti-HM1.24 antibody
272 <400> SEQUENCE: 8
273 Pro Tyr Trp Met Gln
274 1          5

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Input Set : A:\53466274.app

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277 <210> SEQ ID NO: 9
278 <211> LENGTH: 16
279 <212> TYPE: PRT
280 <213> ORGANISM: Artificial Sequence
282 <220> FEATURE:
283 <223> OTHER INFORMATION: Description of Artificial Sequence: CDR (2) of H
284     chain V region of anti-HM1.24 antibody
286 <400> SEQUENCE: 9
287 Ser Ile Phe Gly Asp Gly Asp Thr Arg Tyr Ser Gln Lys Phe Lys Gly
288   1             5             10             15
291 <210> SEQ ID NO: 10
292 <211> LENGTH: 11
293 <212> TYPE: PRT
294 <213> ORGANISM: Artificial Sequence
296 <220> FEATURE:
297 <223> OTHER INFORMATION: Description of Artificial Sequence: CDR (3) of H
298     chain V region of anti-HM1.24 antibody
300 <400> SEQUENCE: 10
301 Gly Leu Arg Arg Gly Gly Tyr Tyr Phe Asp Tyr
302   1             5             10
305 <210> SEQ ID NO: 11
306 <211> LENGTH: 379
307 <212> TYPE: DNA
308 <213> ORGANISM: Artificial Sequence
310 <220> FEATURE:
311 <223> OTHER INFORMATION: Description of Artificial Sequence: DNA coding for
312     humanized L chain V region of anti-HM1.24
313     antibody
315 <220> FEATURE:
316 <221> NAME/KEY: sig_peptide
317 <222> LOCATION: (1)..(57)
319 <220> FEATURE:
320 <221> NAME/KEY: mat_peptide
321 <222> LOCATION: (58)..(378)
323 <220> FEATURE:
324 <221> NAME/KEY: CDS
325 <222> LOCATION: (1)..(378)
327 <400> SEQUENCE: 11
328 atg gga tgg agc tgt atc atc ctc tcc ttg gta gca aca gct aca ggt   48
329 Met Gly Trp Ser Cys Ile Ile Leu Ser Leu Val Ala Thr Ala Thr Gly
330       -15             -10             -5
332 gtc cac tcc gac atc cag atg acc cag agc cca agc agc ctg agc gcc   96
333 Val His Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala
334       -1   1             5             10
336 agc gtg ggt gac aga gtg acc atc acc tgt aag gct agt cag gat gtg   144
337 Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Asp Val
338       15             20             25
340 aat act gct gta gcc tgg tac cag cag aag cca gga aag gct cca aag   192
341 Asn Thr Ala Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys

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Use of n and/or Xaa has been detected in the Sequence Listing.
 Review the Sequence Listing to insure a corresponding
 explanation is presented in the <220> to <223> fields of
 each sequence using n or Xaa.

VERIFICATION SUMMARYPATENT APPLICATION: **US/09/509,098**

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Input Set : **A:\53466274.app**Output Set: **N:\CRF3\07182001\I509098.raw**

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L:3750 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:136
L:3753 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:136
L:4243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:157
L:5092 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:199
L:5095 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:199
L:5098 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:199
L:5101 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:199